

10/529748

JC17 Rec'd PCT/PTO 30 MAR 2005

IN THE CLAIMS

1. (original) A pharmaceutical composition which is comprised of protein S and/or at least one functional variant thereof, wherein the protein S or the functional variant is present in an amount sufficient to provide neuroprotection.
2. (original) The composition of Claim 1, wherein protection against ischemia, hypoxia, re-oxygenation injury, or a combination thereof is provided in the nervous system of a subject in need of treatment.
3. (currently amended) The composition of Claim 1 ~~any one of Claims 1-2~~, wherein inhibition of apoptosis and/or promotion of cell survival is provided in the nervous system of a subject in need of treatment, while antithrombotic effects are minimized.
4. (currently amended) The composition of Claim 1 ~~any one of Claims 1-3~~, wherein the composition is adapted to protect one or more cell types in a subject's nervous system.
5. (currently amended) The composition of Claim 1 ~~any one of Claims 1-4~~, wherein the protein S or the functional variant acts through one or more receptors selected from the group consisting of annexin II and Tyro3/Axl receptor tyrosine kinases.
6. (original) A method of protecting one or more cell types of a subject's nervous system comprising administration of an effective amount of protein S and/or at least one functional variant thereof to the one or more cell types to provide neuroprotection.
7. (original) The method of Claim 6, wherein the protein S or the functional variant is a human protein S or functional variant.
8. (currently amended) The method of Claim 6 ~~any one of Claims 6-7~~, wherein the protein S or the functional variant has at least anti-thrombotic activity.

9. (currently amended) The method of Claim 6 ~~any one of Claims 6-8~~, wherein the protein S or the functional variant has at least anti-inflammatory activity.

10. (currently amended) The method of Claim 6 ~~any one of Claims 6-9~~, wherein the protein S or the functional variant at least inhibits apoptosis or acts as a cell survival factor.

11. (currently amended) The method of Claim 6 ~~any one of Claims 6-10~~, wherein the protein S or the functional variant acts through one or more receptors selected from the group consisting of annexin II and Tyro3/Axl receptor tyrosine kinases.

12. (currently amended) The method of Claim 6 ~~any one of Claims 6-11~~, wherein no protein C or activated protein C is administered.

13. (currently amended) The method of Claim 6 ~~any one of Claims 6-12~~, wherein there is no deficiency of protein S activity in the subject.

14. (currently amended) The method of Claim 6 ~~any one of Claims 6-13~~, wherein the protein S or the functional variant is administered to the subject after injury caused by at least ischemia, hypoxia, re-oxygenation injury, or a combination thereof.

15. (currently amended) The method of Claim 6 ~~any one of Claims 6-13~~, wherein the protein S or the functional variant is administered to the subject at risk for injury caused by at least ischemia, hypoxia, re-oxygenation injury, or a combination thereof.

16. (currently amended) The method of Claim 6 ~~any one of Claims 6-13~~, wherein the protein S or the functional variant is administered before and/or after diagnosis of disease or another pathological condition.

17. (currently amended) The method of Claim 6 ~~any one of Claims 6-13~~, wherein cerebral blood flow in the subject's brain is increased by administration of the protein S or the functional variant.

18. (currently amended) The method of Claim 6 ~~any one of Claims 6-13~~, wherein volume of the subject's brain which is affected by injury, infarction, edema, or a combination thereof is decreased by administration of the protein S or the functional variant.

Claims 19-21 (canceled)

22. (original) A process of screening for an agent which inhibits apoptosis and/or acts as a cell survival factor comprising:

- (a) providing a library of candidate agents which are variants of protein S and
- (b) selecting at least one agent by its ability to inhibit apoptosis and/or act as a cell survival factor.

23. (currently amended) A process of producing an agent which inhibits apoptosis and/or acts as a cell survival factor comprising: the process of Claim 22 and

- ~~(a) providing a library of candidate agents which are variants of protein S,~~
- ~~(b) selecting at least one agent by its ability to inhibit apoptosis and/or act as a cell survival factor, and~~
- [[c)] producing the at least one agent.

Claim 24 (canceled)